Algorithm to predict stock price using LSTM model

- The code first prompts the user to input a stock symbol and sets the start and end dates for the data to be collected from Yahoo Finance.

- The historical stock price data is then scraped from Yahoo Finance using the yf.download() function from the yfinance package.

- The stock price data is loaded into a pandas dataframe and preprocessed using a MinMaxScaler() to scale the values between 0 and 1.

- The training dataset is created by taking 80% of the scaled data and splitting it into x_train and y_train, where the input data is a sequence of the past 100 closing prices and the output is the next closing price.

- An LSTM model is built using the Sequential() class from the keras package with two LSTM layers and two dense layers.

- The model is compiled using the adam optimizer and the mean squared error loss function.

- The model is trained using the fit() method with a batch size of 1 and 100 epochs.

- The test dataset is created by taking the remaining 20% of the scaled data and splitting it into x_test and y_test.

- The model is used to make predictions on the test dataset and the predictions are then inverse scaled to get the actual stock prices.

- The stock prices for the training and test data are then plotted along with the predicted stock prices for the test data.

- The code then prints the predicted closing price for the next day.